

Work Order ID 102064

102064

Page 1

May-23-13 10:09:48 AM

Item ID: D205-634-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 5/23/13 Start Qty: 1.00

1

Cust Item ID:

Required Date: 6/11/13 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: ML5

Date: 130523

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D2580-041

(DEO) Rev.E

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG005

N/A

110

0.00

110

BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio 16

2-Cut tubes as per Dwg. D2580

3- scribe batch# in aft end of tube

>

- DC 13 / 07 / 03

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Revision ID:

Item Name: Replacement Skidtube

Stop *NS2*

Start Date: 5/23/13 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 6/11/13 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120		0.00							
120									
Skidtubes	Memo	0.00							
Skidtubes	1- Deburr ends and remove bending marks								
	2- Prepare tube for welding as per QSI 004								
130	QC5- Inspect part completeness to step on W/O	0.00							
130									
QC	Memo	0.00							
Quality Control									

1 0 BE13/07/03

DA
03
89
13-7-3

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Item ID: D205-634-041

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N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 5/23/13 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 6/11/13 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start *NR1*

QC: Date: SPC (Y/N): Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140		0.00							

140

Skidtubes

Skidtubes

Memo

0.00

1-Weld step D2576 as per Dwg. D2580 and QSI 004
A/R Aluminum Rod m/25/27

2-Grind welds on step as per Dwg D2580

3- Insert D4202-1 spacer, swage as per QSI002 and trim/ grind flush per QSI002 and dwg. Hold x-bolt with DT9701 Use tube expander 1/2 x17G to start expansion and finish with 1/2 x 18G to achieve dwg dimension.

4-Drill holes for wearplates using DT 8217 & DT8937, 7.40" from most fwd saddle holes (ref only) Open holes to 19/64", adjust stopper not to hit web. Debur

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Debur

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Debur

150

150

QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

13.79

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Item ID: D205-634-041

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Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 5/23/13 Start Qty: 1.00

1

Cust Item ID:

Required Date: 6/11/13 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start *NR1*

QC: Date: SPC (Y/N): Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160 QC5- Inspect part completeness to step on W/O

0.00

160

QC

Memo

0.00

Quality Control

13.7.9

170 Pressure Wash per QSI005 4.3

0.00

170

HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.

1 76 13.7.9

180 White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

180

Powdercoat

Memo

0.00

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

11/25/20

8:45

200°

9:15

1 13-7.15

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Item ID: D205-634-041

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N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 5/23/13 Start Qty: 1.00

1

Cust Item ID:

Required Date: 6/11/13 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC3- Inspect Part Finish	0.00							
190									
QC	Memo	0.00							
Quality Control									

1x d Jell 15/07/15

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Item ID: D205-634-041

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N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 5/23/13 Start Qty: 1.00

1

Cust Item ID:

Required Date: 6/11/13 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200		0.00							
200									
HandFinish		0.00							
Hand Finishing	<p>Memo</p> <p>1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates A/R Sikaflex-291 <u>1126149</u> Sikaflex expire date: <u>13/11</u></p> <p>2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580</p> <p>3-Inspect for foreign object per QSI 024</p> <p>4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive A/R Sikaflex-291 <u>1126149</u> Sikaflex expire date: <u>13/11</u></p> <p>5-Wing Walk as per Dwg D2580 and QSI 005 4.4 Batch: <u>1126051</u></p>								

12 4 34 13/07/15

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Item ID: D205-634-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 5/23/13 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 6/11/13 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

210 QC5- Inspect part completeness to step on W/O

0.00

210

QC

Quality Control

Memo

0.00

Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024

220

0.00

220

Packaging

Packaging

Packaging

Memo

0.00

Identify and pack for shipping as per PPPD205-634-041

Location: _____

PPP Rev: _____

230

0.00

230

QC

Quality Control

QC21- Final Inspection - Work Order Release

Memo

0.00

21
13-7-15

PP 101723

13/7/25

13/7/29

mf
13-7-25

Picklist Print

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Work Order ID: 102064

102064

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 5/23/13

Required Date: 6/11/13

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30
 KJ IPP Rev P 10.02.19
 per PAR09-043 EC verified by:DD
 IPP Rev. O 06.02.28 Added paperwork EC
 IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM IPP Rev:Q
 10.12.01 as per chg003 DD verf:EC IPP REV:R 12.01.23 AS
 PER ECN11-684 VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4202-1		Manufactured	No			140	Each	243.0000	20	20			

D4202-1

Spacer

Location

Loc Qty

Loc Code

LG 99216 219
 96906 4
 98699 215
 LG002 24
 97447 24

20 13-7-8

D2580-1

Manufactured No

110

Each

8.0000

1

1

D2580-1

205 Bent Tube

Location

Loc Qty

Loc Code

LG 8
 100643 4
 101131 3
 99392 1

1 **

Dec 13/07/03

D2576-3

Manufactured No

140

Each

36.0000

1

1

D2576-3

Step (maching detail)

Location

Loc Qty

Loc Code

LG002 36
 96474 36

**

BB 13/07/04

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Work Order ID: 102064

102064

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 5/23/13

Required Date: 6/11/13

Start Qty: 1.00

Required Qty: 1.00

D2855

Manufactured No

200

Each

81.0000

1

1

D2855

Cap

**

13/07/15

Location

Loc Qty

Loc Code

FP001

81

73347

1

86441

30

89802

40

94019

10

x1

AN3-5A

Purchased

No

200

Each

897.0000

2

2

AN3-5A

Bolt

**

13/07/15

Location

Loc Qty

Loc Code

FP001

44

122800

44

GA

120

117423

120

ST350

22

120187

22

ST512

711

122416

19

124561

692

x2

AN960JD10L

NAS1149D0332J Purchased

No

200

Each

0.0000

2

2

*AN960JD10L *x

Washer

**

1125044(2x) 13/07/15

Picklist Print

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Work Order ID: 102064

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

102064

D205-634-041

Start Date: 5/23/13

Required Date: 6/11/13

Start Qty: 1.00

Required Qty: 1.00

ALS7-1032-130

Purchased

No

200

Each

483.0000

50

50

AI S7-1032-130

Insert

**

ll 13/07/15

Location

Loc Qty

Loc Code

FG

100

M125770

x50

121444

100

FP001

315

117717

27

118966

22

119530

73

119775

2

120181

12

121444

176

122474

3

ST280

68

122763

18

124226

50

AN3C4A

Purchased

No

200

Each

3,079.000

50

50

AN3C4A

BOLT

**

ll 13/07/15

Location

Loc Qty

Loc Code

FG

20

M126105

x50

122814

20

ST512

3059

121205

3

123759

56

125388

3000

AN960C10L

NAS1149C0332

Purchased

No

200

Each

0.0000

50

50

*AN960C10I *

washer

**

M124580 (x50) ll 13/07/15

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Shop Packet Print

Page 3

Picklist Print

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Work Order ID: 102064

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

102064

D205-634-041

Start Date: 5/23/13

Required Date: 6/11/13

Start Qty: 1.00

Required Qty: 1.00

D3566-13

Manufactured No

200

Each

22.0000

1

1

D3566-13

Gasket

**

13/07/15

Location

Loc Qty

Loc Code

FG

6

B102321

x1

89050

2

92482

2

98908

2

FP002

16

100264

10

84880

6

D3566-5

Manufactured No

200

Each

24.0000

1

1

D3566-5

Gasket

**

13/07/15

Location

Loc Qty

Loc Code

FG

4

89219

2

94119

2

FP001

20

100383

16

80374

1

84881

1

98965

2

x1

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Work Order ID: 102064

102064

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 5/23/13

Required Date: 6/11/13

Start Qty: 1.00

Required Qty: 1.00

D3566-1

Manufactured No

200

Each

27.0000

2

2

D3566-1

**

Gasket

11 10/21/15

Location

Loc Qty

Loc Code

FG

14

B102926

x2

100410

4

89051

2

96430

2

96575

4

98981

2

FP001

13

100410

4

68924

2

80919

2

81619

3

84879

1

92838

1

D3564-11

Manufactured No

200

Each

42.0000

1

1

D3564-11

**

Wearshoe

11 13/07/15

Location

Loc Qty

Loc Code

FG

6

77056

4

85473

2

FP001

22

99313

22

FP002

14

V1

100340

13

89808

1

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Shop Packet Print

Page 5

Picklist Print

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Work Order ID: 102064

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

102064

D205-634-041

Start Date: 5/23/13

Required Date: 6/11/13

Start Qty: 1.00

Required Qty: 1.00

D3564-13

Manufactured No

200

Each

24.0000

1

1

D3564-13

Wearshoe

**

13/07/15

Location

Loc Qty

Loc Code

FG

1

B101005

21

89044

1

FP001

21

99023

6

99364

15

FP002

2

71594

1

92546

1

D3564-9

Manufactured No

200

Each

34.0000

1

1

D3564-9

Wearshoe

**

13/07/15

Location

Loc Qty

Loc Code

FG

6

76950

4

88407

2

FP002

28

100423

13

67590

4

69943

1

82255

1

88407

1

99351

8

21

Picklist Print

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Work Order ID: 102064

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

102064

D205-634-041

Start Date: 5/23/13

Required Date: 6/11/13

Start Qty: 1.00

Required Qty: 1.00

D3564-5

Manufactured No

200

Each

27.0000

1 1

D3564-5

Wearshoe

**

M 13/07/15

Location

Loc Qty

Loc Code

FG

4

34806

2

89048

2

FP002

23

100322

12

85475

4

99303

7

x1

D2594-3

Manufactured No

200

Each

407.0000

16 16

D2594-3

O-Ring, 205 Skidtube

**

M 13/07/15

Location

Loc Qty

Loc Code

FP

63

99291

63

FP001

344

65518

41

79496

14

79755

2

97671

287

M 102334

x16

Picklist Print

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Work Order ID: 102064

102064

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 5/23/13

Required Date: 6/11/13

Start Qty: 1.00

Required Qty: 1.00

D2594-1

Manufactured No

200

Each

714.0000

16

16

D2594-1

Plug, 205 Skidtube

**

M 13/07/15

Location

Loc Qty

Loc Code

FP001

687

100493

224

73401

30

74442

92

79495

28

88509

17

88922

2

91949

7

92554

1

97987

1

99038

185

99788

100

FP-001

27

42807

27

116

102064

LIST OF MATERIALS

ITEM	QTY -041	QTY -045	QTY -047	PART NUMBER	DESCRIPTION
1	X			D2580-041	SKIDTUBE ASSEMBLY
2		X		D2580-045	SKIDTUBE ASSEMBLY
3			X	D2580-047	SKIDTUBE ASSEMBLY
4	1	1	1	D2500-1-190	EXTRUSION
5			16	D2570	BUSHING
6	1	1	1	D2576-3	STEP
7	20	24	25	D2579	SPACER
8	16	16	8	D2594-1	PLUG
9	16	16	8	D2594-3	O-RING
10	1	1	1	D2596	205 WEB
11	1	1	1	D2855	AFT CAP
12	1	1		D3564-5	WEARSHOE
13	1	1		D3564-9	WEARSHOE
14	1	1		D3564-11	WEARSHOE
15	1	1		D3564-13	WEARSHOE
16	2	2		D3566-1	GASKET
17	1	1		D3566-5	GASKET
18	1	1		D3566-13	GASKET
19			1	D4406-041	WEARPLATE ASSEMBLY
20			1	D4406-043	WEARPLATE ASSEMBLY
21	50	50		ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
22	50	50		AN3C4A	BOLT
23	2	2	2	AN3-5A	BOLT
24			8	AN4-45A	BOLT
25	50	50		NAS1149C0332R	WASHER (AN960C10L)
26	2	2	2	NAS1149D0332J	WASHER (AN960JD10L)
27			8	MS21042-4	NUT (OR MS21042L4)

GENERAL NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ASSEMBLY (-041/-047) GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.2
POWDER COAT ASSEMBLY (-045) GREEN SANDEX (REF 4.3.5.8) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D2580-041 = 34.5 lbs
D2580-045 = 34.5 lbs
D2580-047 = 37.7 lbs
- 8) WELDING PER DART QSI 004.
- 9) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 10) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 11) USE DART DRILL TEMPLATE DT8217 & DT8937 ONLY FOR D2580-041/-045 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTIONS B-B AND F-F (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241/291.
- 12) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES FOR D2580-041/-045 AND 8 PLACES FOR D2580-047)
- 13) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

DEO ATTACHED

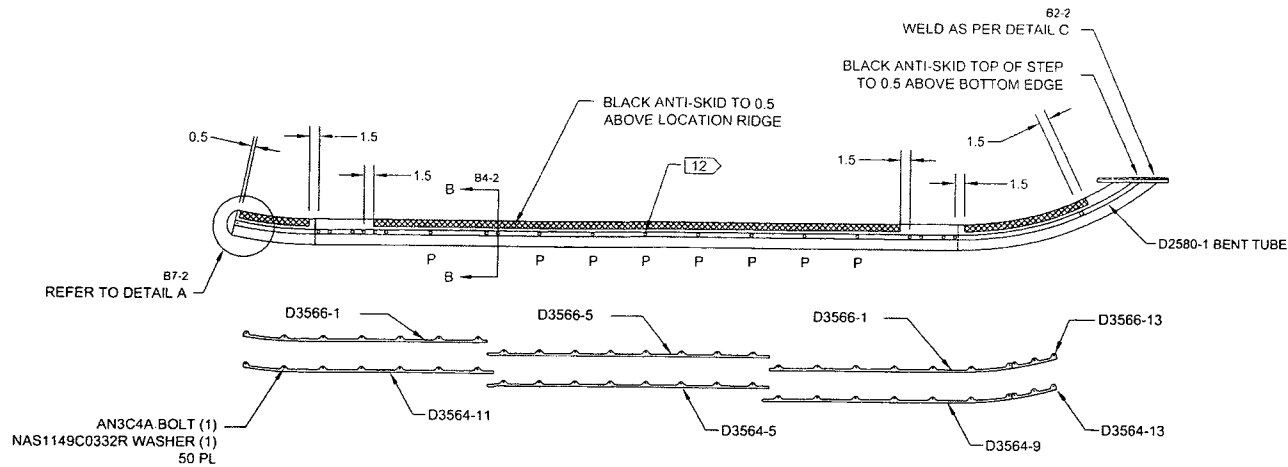
RELEASED

2011-08-29

E	ADD D2580-047 (ZN C4-7) AND D2580-7 (ZN B3-8); INCLUDED DEO D2580-D-1; REFORMATTED DRAWING TO CURRENT STANDARDS; DT8217 & DT8937 WAS TD2577-205 (ZN C4-1)	RF	11.06.21
D	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/ 9183	PH	07.04.05
C	REDRAWN, INCLUDED DEO 9094/ 9097	CP	98.08.26
B	AS MANUFACTURED	DS	96.12.02
A	NEW ISSUE	DS	96.09.16
REV.	DESCRIPTION	BY	DATE
DESIGN	#		
DRAWN	RF		
CHECKED	#		
MFG. APPR.	#		
APPROVED	#		
DE APPR.	#		
DATE	11.06.21		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. D2580		REV. E SHEET 1 OF 8	
TITLE 205 SKIDTUBE ASSEMBLY		SCALE NTS	
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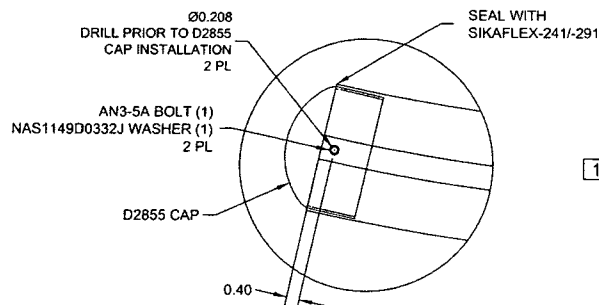
102064 MLC5
13-05-23

102064

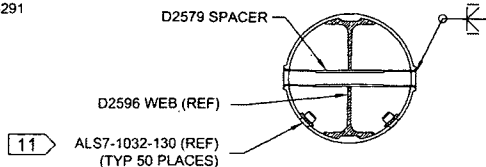


D2580-041 ASSEMBLY DETAIL

DETAIL A C7-2
SCALE 5X

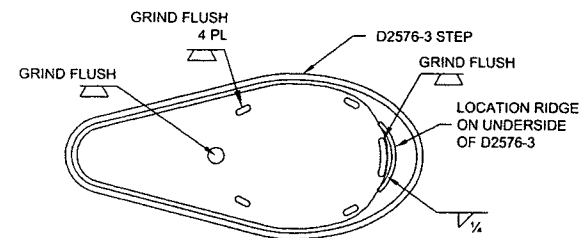


D5-2
SECTION B-B
SCALE 5X



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

DETAIL C D3-2
SCALE 5X

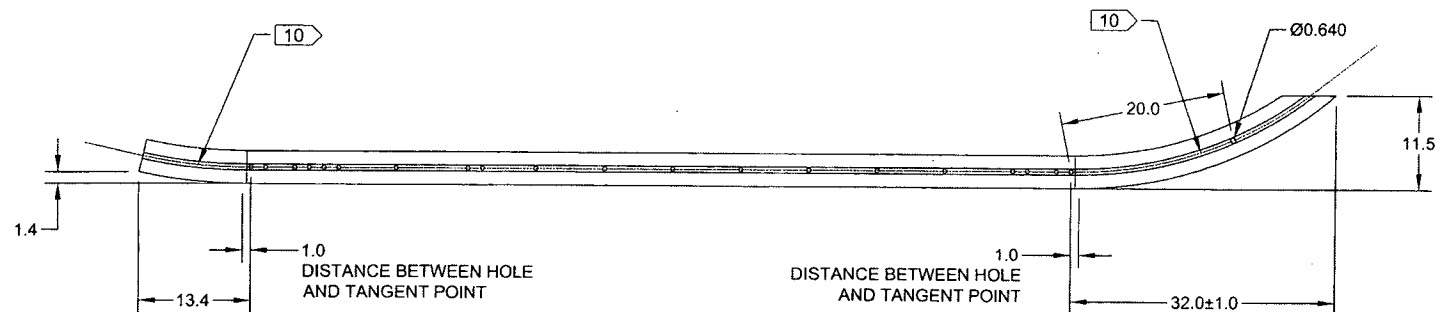


DESIGN	4	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 2 OF 8
APPROVED	10	TITLE	SCALE
DE APPR.	10	205 SKIDTUBE ASSEMBLY	NTS
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DEO ATTACHEE

RELEASED
2011-08-30

1020064



D2580-1 BENT TUBE
(MAKE FROM D2580-101 TUBE)

DEO ATTACHED

RELEASED
2011-08-28
JW

DESIGN	<i>RF</i>	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>10</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>10</i>	D2580	SHEET 3 OF 8
APPROVED	<i>10</i>	TITLE	SCALE
DE APPR.	<i>10</i>	205 SKIDTUBE ASSEMBLY	NTS
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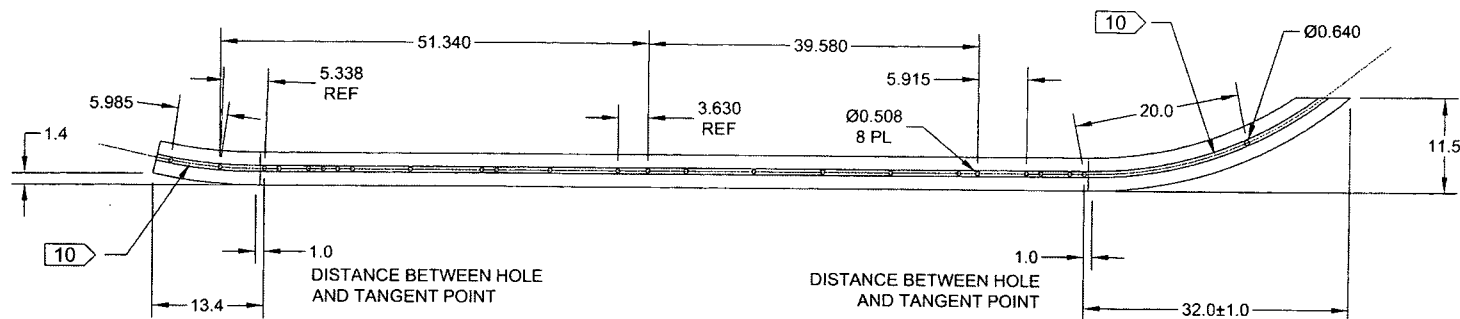


Diagram illustrating the grinding locations for the D2576-3 step. The diagram shows a cross-section of the step with the following labels:

- GRIND FLUSH 4 PL
- GRIND FLUSH
- D2576-3 STEP
- GRIND FLUSH
- LOCATION RIDGE ON UNDERSIDE OF D2576-3
- $\frac{1}{4}$

DESIGN	4	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. I
MFG. APPR.	10	D2580	SHEET 4 OF 4
APPROVED	10	TITLE	SCALE
DE APPR.	10	205 SKIDTUBE ASSEMBLY	NT
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102064



D2580-5 BENT TUBE
(MAKE FROM D2580-101 TUBE)

DEO ATTACHED

RELEASED
2011-08-29

DESIGN	#	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	AP	DRAWING NO.	REV. E
MFG. APPR.	AP	D2580	SHEET 5 OF 8
APPROVED	AP	TITLE	SCALE
DE APPR.	AP	205 SKIDTUBE ASSEMBLY	NTS
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Technical drawing of a bent tube assembly, likely a tail fin or stabilizer. The drawing includes the following details:

- Dimensions:**
 - 0.5 (at the left end)
 - 1.5 (multiple locations along the top edge)
 - 1.5 (at the right end)
- Callouts and Labels:**
 - B2-7 (at the top right corner)
 - WELD AS PER DETAIL J (at the top right corner)
 - BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE (pointing to the top surface)
 - BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE (pointing to the top surface)
 - B4-7 (pointing to the top surface)
 - 12 (in a box, pointing to the top surface)
 - D2580-7 BENT TUBE (pointing to the main tube)
 - D4406-043 (pointing to a bolt/bushing assembly)
 - D4406-041 (pointing to a bolt/bushing assembly)
 - B7-7 (pointing to the left end)
 - REFER TO DETAIL H (pointing to the left end)
 - AN4-45A BOLT (1)
 - D2570 BUSHING (2)
 - MS21042-4 NUT (1)
 - 8 PL (8 PL)
- Other Features:**
 - A series of 'P' marks along the bottom edge.
 - A series of 'I' marks along the bottom edge.
 - A series of 'J' marks along the bottom edge.
 - A series of 'K' marks along the bottom edge.
 - A series of 'L' marks along the bottom edge.
 - A series of 'M' marks along the bottom edge.
 - A series of 'N' marks along the bottom edge.
 - A series of 'O' marks along the bottom edge.
 - A series of 'P' marks along the bottom edge.
 - A series of 'Q' marks along the bottom edge.
 - A series of 'R' marks along the bottom edge.
 - A series of 'S' marks along the bottom edge.
 - A series of 'T' marks along the bottom edge.
 - A series of 'U' marks along the bottom edge.
 - A series of 'V' marks along the bottom edge.
 - A series of 'W' marks along the bottom edge.
 - A series of 'X' marks along the bottom edge.
 - A series of 'Y' marks along the bottom edge.
 - A series of 'Z' marks along the bottom edge.

DEO ATTACHED
RELEASED
2011-08-29

Ø0.208

DRILL PRIOR TO D2855
CAP INSTALLATION
2 PL

AN3-5A BOLT (1)

NAS1149D0332J WASHER (1)
2 PL

D2855 CAP

SEAL WITH
SIKAFLEX-241/-291

13

0.40

D2579 SPACER

D2596 WEB (REF)

Diagram illustrating the grinding locations for the D2576-3 step. The diagram shows a cross-section of the step with the following labels:

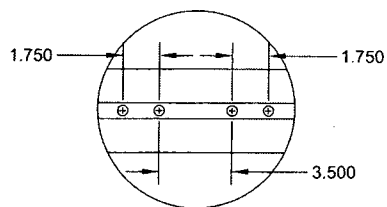
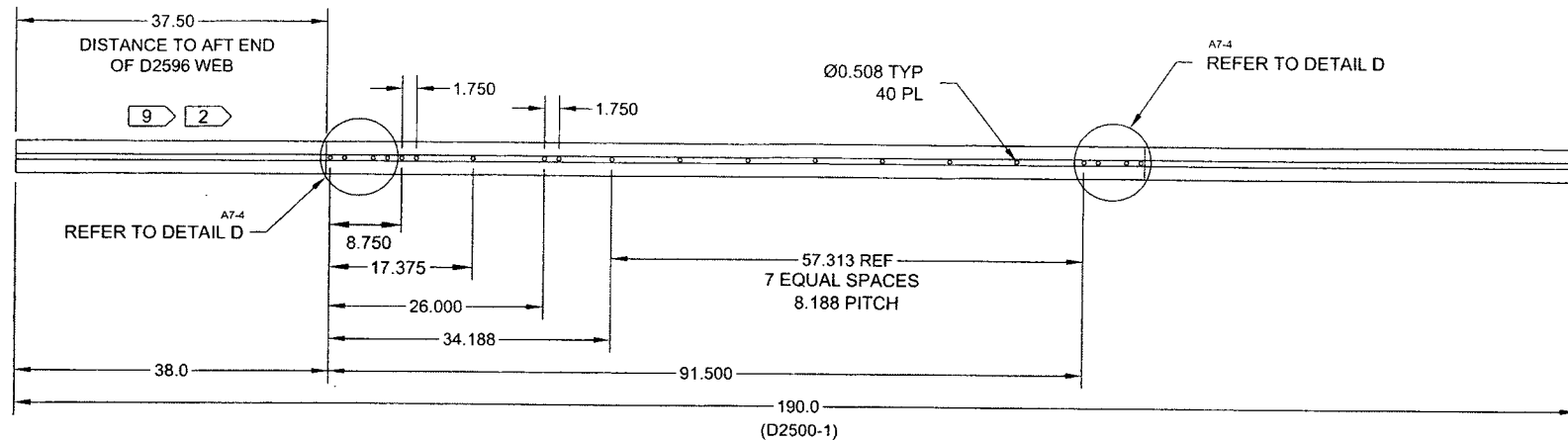
- GRIND FLUSH 4 PL
- GRIND FLUSH
- D2576-3 STEP
- GRIND FLUSH
- LOCATION RIDGE ON UNDERSIDE OF D2576-3
- $\nabla \frac{1}{4}$

- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:**
- 1. CHAMFER HOLE 0.050 X 45°**
 - 2. INSERT D2579 SPACER (25 PLACES)**
 - 3. WELD INTO PLACE AND GRIND FLUSH**
 - 4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP**

DESIGN	4	DART AEROSPACE LTD	
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CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 6 OF 8
APPROVED	10	TITLE	SCALE
DE APPR.	10	205 SKIDTUBE ASSEMBLY	NTS
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CHECKED	RF	DRAWING NO.	REV. E
MFG. APPR.	RF	D2580	SHEET 7 OF 8
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102064



DETAIL D
SCALE 5X

D2580-101 TUBE

DEO ATTACHED
RELEASED
2011-08-29

DESIGN	#	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
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MFG. APPR.	10	D2580	SHEET 8 OF 8
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DE APPR.	#	205 SKIDTUBE ASSEMBLY	NTS
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DRAWING NO. D2580	TITLE 205 SKIDTUBE ASSEMBLY	REV. E	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D2580-E-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>ASS</i>	MFG. APPR. <i>EC</i>	APPROVED <i>#</i>	DE APPR. <i>AA</i>		
DATE 11.12.13	DATE 11.12.13	DATE 11.12.13	DATE 11.12.13	DATE 11.12.13		

PURPOSE:

CHANGE ALL C'BORED WELDED CROSSBOLT SPACERS TO SWAGED SPACERS

CHANGE:

PARTS LIST IS AMENDED AS FOLLOWS:

WAS

QTY	QTY	QTY	PART NUMBER	DESCRIPTION
-041	-045	-047		
20	24	25	D2579	CROSS BOLT SPACER

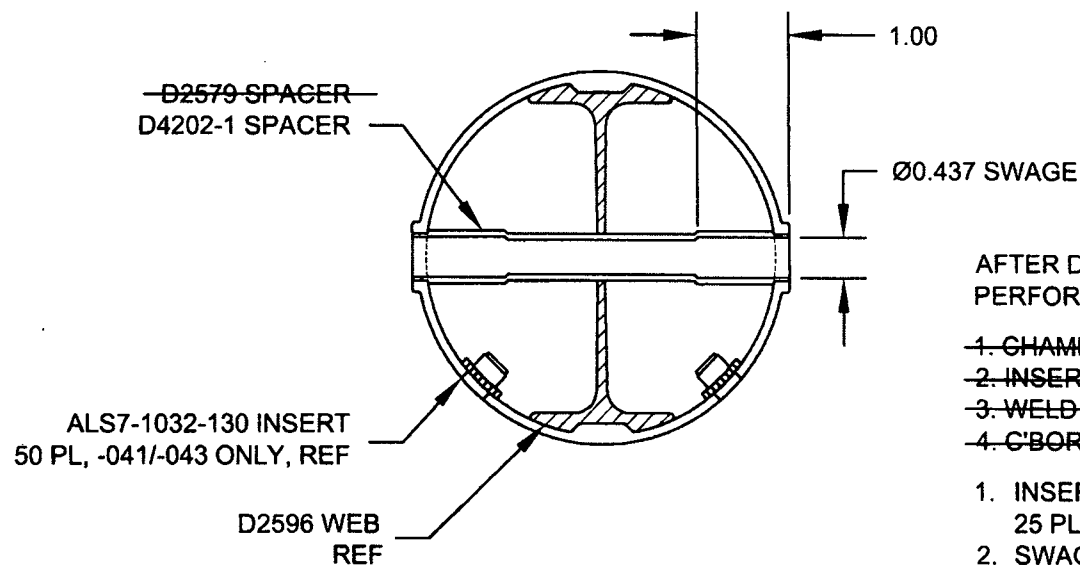
IS

	4		* D2579	CROSS BOLT SPACER
20	20	25	D4202-1	SPACER

SECTION B-B, SECTION F-F, & SECTION I-I ARE AMENDED AS FOLLOWS
FOR ALL HOLES THAT WERE ORIGINALLY C'BORED:

*** FOR -045 SKIDTUBE ONLY:**
WELD 4X D2579 SPACERS PER DWG
IN LOCATIONS MARKED "NO C'BORE".
REF SHEET 4 OF DWG.

RELEASED
2011-12-14



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

- ~~1. CHAMFER HOLE 0.050 X 45°~~
- ~~2. INSERT D2579 SPACER (20 PLACES)~~
- ~~3. WELD INTO PLACE AND GRIND FLUSH~~
- ~~4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP~~

1. INSERT D4202-1 SPACER, 20 PL (-041) OR 20 PL (-045) OR 25 PL (-047)
2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002
3. TRIM / GRIND FLUSH PER QSI 002

SECTION B-B, F-F, I-I
NOT TO SCALE

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